



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/346,375	07/01/1999	ROBERT CLEMENT	2170.00019	2343

23552 7590 09/09/2003

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

[REDACTED] EXAMINER

ELVE, MARIA ALEXANDRA

ART UNIT	PAPER NUMBER
	1725

DATE MAILED: 09/09/2003

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/346,375	CLEMENT ET AL.
	Examiner	Art Unit
	M. Alexandra Elve	1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 5/30/03 & 6/30/03.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10, 13-21, 23-42 and 44-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10, 13-21, 23-42 and 44-51 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6) <input type="checkbox"/> Other: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>17</u> . | |

DETAILED ACTION

Double Patenting

Claims 1-10, 13-18, 21, 23-25, 30-34, 38-41 & 45-46 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-7, 10-32 & 48 of copending Application No. 09/184,186. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 13-21, 23-42, 44-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burkart et al. (CN Pat. 2,073,092) in view of Gofuku et al. (US Pat. 5,269,868) and Muncheryan (US Pat. 4,808,789).

Burkart et al. teaches a method for separating two elements whereby the adhesive joint is loosened or destroyed (abstract, p. 19, lines 12-27 and figure 6). This releasable adhesive joint is especially useful in fixing vehicle glass panes to a vehicle body frame (abstract). The object of the releasable adhesive joint is to aid in the quick,

Art Unit: 1725

convenient and efficient repair or disassemble of a vehicle pane (p. 2, lines 13-25). The heating of the joint results in loosening the adhesion or even destroying it, that is, the adhesive joint is weakened or destroyed so that the two elements, vehicle pane and frame, separate with ease (p. 4, lines 10-18). Included in the list of suitable materials, which may be used, as a separating member between the two elements is a polyurethane based material (p. 8, lines 15-28 and p. 9, lines 1-8). A specific embodiment (figure 6) shows a glass pane mounted to a vehicle frame wherein there are two adhesive beads comprising the joint. No extra or separate heat separating member is used because one of the two beads is made of a material that is separable either by loosening or damage or destruction (carbonize: destruction of organic substances). Separation may be effected under the influence of high frequency, microwave or infrared radiation. This would encompass the use of a laser. Additionally, it is required that the selected radiation could reach the place where heating should occur, be it due to the geometry of the adhesive bond or due to the type of material of one of the elements (p. 11, lines 8-22, p. 19, lines 12-27).

Burkart et al. does not disclose absorbing laser energy into the adhesive, although this is inherent in the heating of the adhesive joint by radiation. Additionally, the use of only one adhesive bead is not disclosed, although this would be an obvious variation in light of fabrication ease and manufacturing economies.

Gofuku et al. teaches a method of separating bonded substrates in which an energy beam is transmitted through one of the substrates and absorbed by the adhesive (abstract). Specifically, the screen of a liquid crystal display device is

Art Unit: 1725

disassembled from its wiring frame (figure 4). The main substrate is a transparent glass screen. The adhesive is made of a polymer material (col. 1, lines 21-34). The method of separating the bonded substrates is conducted using an irradiating energy beam on the bonding portions of the bonded substrates to separate one substrate from the other.

The energy beam transmits through one substrate and is absorbed into the adhesive (col. 3, lines 3-13). The chemical connection between the adhesive and substrate is thought to be cut or changed (this would encompass carbonization of the adhesive) due to the irradiation of the laser, thereby allowing the adhesive and substrates to be separated at the bonding surfaces (col. 4, lines 24-29). Laser sources may include excimer, Nd-Yag, Xe, Ar, CO₂, copper vapor lasers and so forth (col. 5, lines 1-7).

Adhesives, which may require separation, can include urethane adhesives (col. 5, lines 13-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use one adhesive bead which absorbs laser energy, as taught by Gofuku et al. in the Burkart et al. separation method, because one adhesive bead is a manufacturing variant and would ease the fabrication of vehicle windscreen/body construction. Furthermore, laser heating of an adhesive typically would entail absorbing the energy beam.

Burkart et al. and Gofuku et al. disclose the use of infrared, excimer, Nd-Yag, Xe, Ar, CO₂, copper vapor lasers and so forth; however, some fundamental details of lasers are not taught.

Muncheryan teaches that a high-quality laser beam is generated using a solid state laser rod, which may be pumped by laser diodes. Laser radiation may also be Q-

Art Unit: 1725

switched to achieve high-power laser outputs at short pulses, such as nanoseconds. These are characteristically important in precision areas such as medical surgery, semiconductor circuit development work, military applications and so forth (col. 1, lines 5-10, 25-34 and col. 3, lines 28-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to note laser specifications, as taught by the Muncheryan diode-pumped laser instrumentation system, in the Burkart et al. and Gofuku et al. method because these are routine fabrication practices which, when recorded, would help to enhance the precision adhesion separation or destruction.

Response to Remarks

Upon carefully reviewing Applicant's arguments filed May 30, 2003, the Examiner acknowledges applicants amendment of claims 5, 13 & 38.

Applicant's arguments filed May 30, 2003 (paper # 20) have been fully considered but they are not persuasive. Applicant's response does not put the application in condition for allowance. Applicant argues that 35 USC 101 rejection should be withdrawn because co-pending application 09/184,186 does not teach a light delivery system. The examiner respectfully disagrees because it is known in the art that convention pulsed electrical gas discharges typically are used for pumping lasers, which is functionally the same as the light energy delivery system. In addition, applicant argues that a pulsed event is not disclosed in the claims. The examiner respectfully disagrees because pulsed event are disclosed in co-pending instant claims. Further,

Art Unit: 1725

applicant traverses the 35 USC 103 rejection, stating that Burkart et al. does not teach a light delivery system, that Gofuku et al. does not teach a pulsed laser, or that the references do not teach the use of a flash lamp. The examiner respectfully points out that Burkart et al. teaches the use of infrared radiation and furthermore, unobvious cannot be established by attacking the references individually when the rejection is based on a combination of references. In re Novak 16 USPQ 2d 2041, 2043 (Fed. Cir., BPI 1989); In re Merck & Co. 800 F.2d 1091, 231 USPQ 375 (Fed. Cir., 1986); In re Keller 208 USPQ 871 (CCPA 1981); Ex parte Varga 189 USPQ 204; Ex parte Campbell 172 USPQ 91 In re Scheckler 168 USPQ 716 (CCPA 1971); In re Young 159 USPQ 725; In re Lyons 150 USPQ 741. Applicant argues that Gofuku does not teach a pulsed laser. It is known that typically lasers are pulsed and Muncheryan disclosed a pulsed laser and furthermore, the rejection is made using a combination of references and unobviousness cannot be demonstrated by attacking the references individually (see above cites). Applicant also argues that the references do not teach a flash lamp. The respectfully disagrees because it is known that flash lamps are an integral component of a laser and thus functionally, the same as a laser system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is (703)

Art Unit: 1725

308-0092. The examiner can normally be reached Monday to Friday from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn, can be reached on (703) 308-3318. The fax number for non-after finals is 703-872-9310 and for after finals is 703-872-9311.

Any inquiry of general nature to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0661.



M. ALEXANDRA ELVE
PRIMARY EXAMINER

September 8, 2003.